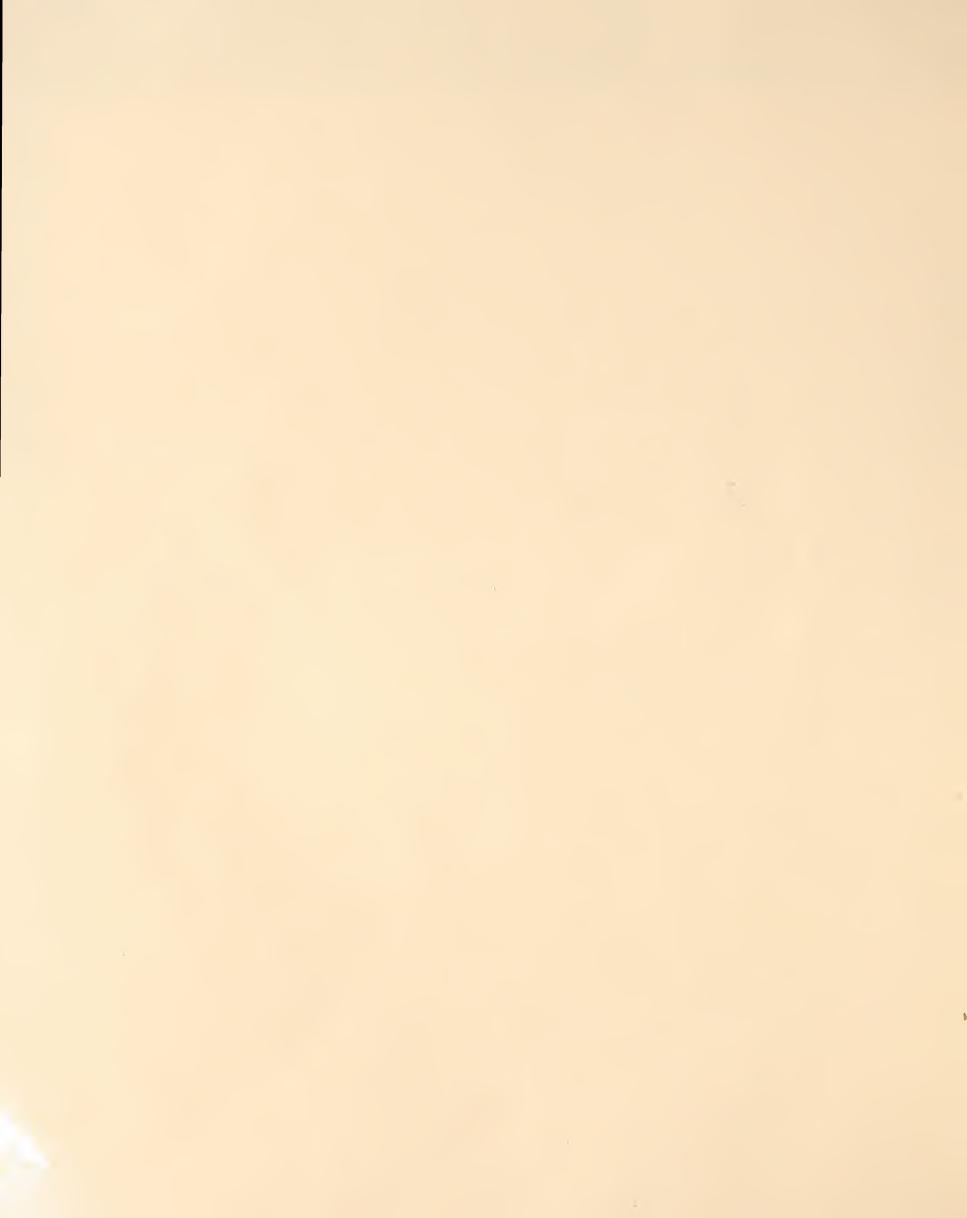
Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.





WATER SUPPLY OUTLOOK FOR MONTANA

and FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE, and MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State, and private organizations listed on the inside back cover of this report.



TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

| STATE | ADDRESS | | | | | |
|--------------------|---|--|--|--|--|--|
| Alaska | P. O. Box "F", Palmer, Alaska 99645 | | | | | |
| Arizona | 6029 Federal Building, Phoenix, Arizona 85025 | | | | | |
| Colorado (N. Mex.) | 12417 Federal Building, Denver, Colorado 80202 | | | | | |
| Idaho | Room 345, 304 N. 8th. St., Boise, Idaho 83702 | | | | | |
| Montana | P. O. Box 98, Bozeman, Montana 59715 | | | | | |
| Nevada | P. O. Box 4850, Reno Nevada 89505 | | | | | |
| Oregon | 1218 S. W. Washington St., Portland, Oregon 97205 | | | | | |
| Utah | 4012 Federal Building, Salt Lake City, Utah 84111 | | | | | |
| Washington | 360 U.S. Court House, Spokane, Washington 99201 | | | | | |
| Wyoming | P. O. Box 340, Casper, Wyoming 82601 | | | | | |

PUBLISHED BY OTHER AGENCIES.

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

MENT of

WATER SUPPLY OUTLOOK FOR MONTANA

and FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

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ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

Released by

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STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
Bozeman, Montana

In Cooperation with

J. A. ASLESON

DIRECTOR

Montana Agricultural Experiment Station

Report prepared by

P. E. FARNES, Snow Survey Supervisor

SOIL CONSFRVATION SERVICE P.O. Box 98 Bozeman, Montana 59715



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MONTANA WATER SUPPLY OUTLOOK June 1, 1970

In general, the mountain snow pack continues to be above average east of the divide, and near or above average west of the divide.

Based on telemetry and snow pillow records it appears the peak flows of the Yellowstone River will occur between June 21-30. The Missouri headwaters should peak between June 14-20. Streams in the Clark Fork headwaters west of the divide reached their peak the end of May.

Flathead River drainage snow pillow records are insufficient to determine timing of peak flows.

Supplemental measurements and corrections to previously published data are included in this final 1970 season report.

<sup>*
*</sup> What amount can Montana afford to keep its water clean? *
*



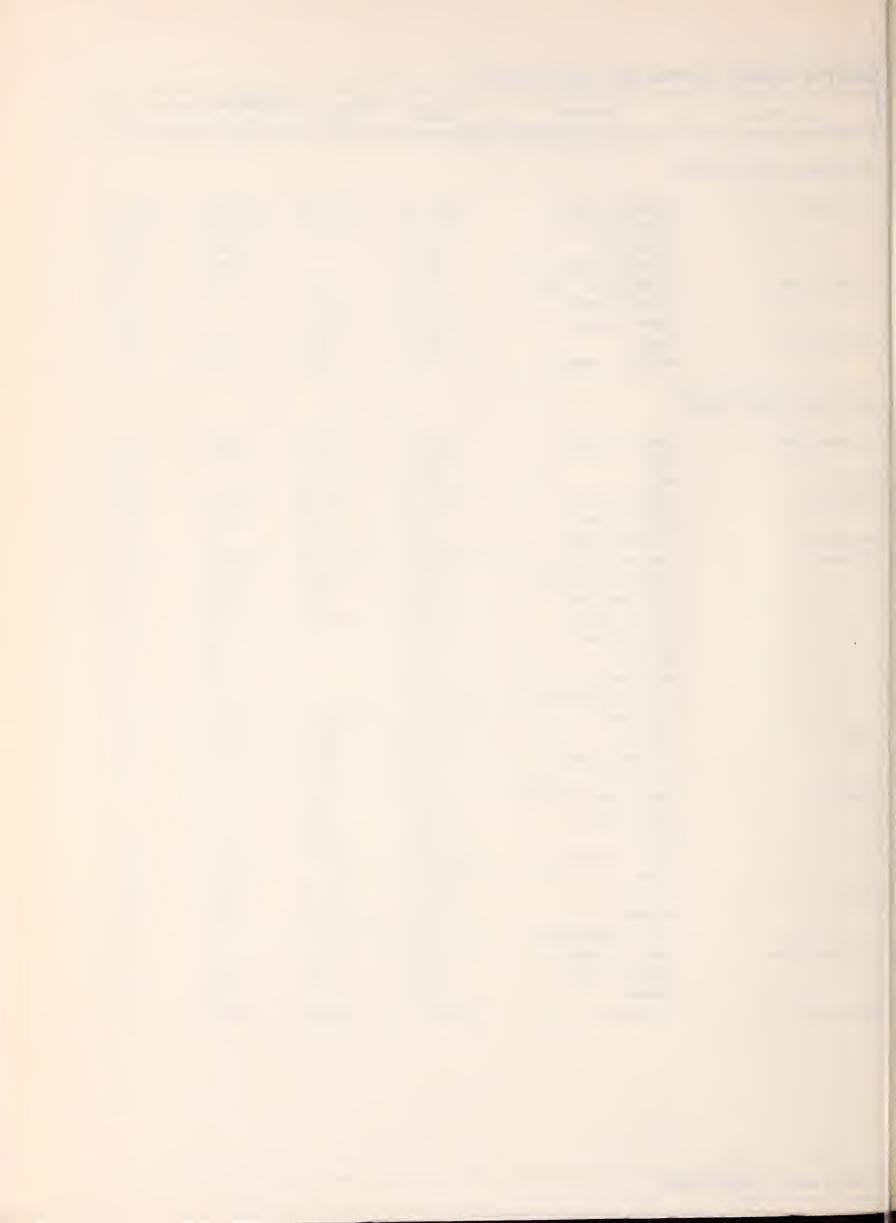
| DRAINAGE BASIN and/or STATION | Profile (Inches) | | Date of | Soil Moisture (Inches) | | | |
|---|------------------|----------|-------------|------------------------|--------------|--------------|-----------|
| Name | Elevation | Depth | Capacity | Survey | This Year | Last Year | Average + |
| | | | | | | | |
| COI | LUMBIA R | RIVER BA | ASIN | | | | |
| | | | | | | | |
| Kootenai | | | | | | | |
| Baree Trail | 3800 | 48 | | 6/02 | 5.3 | - | - |
| Murphy Lake R. S. | 3000 | 48 | | 6/01 | 20.0 | 20.0 | 20.8 |
| Raven R. S. | 3050 | 48 | 23.0 | 6/02 | 18.8 | - | - |
| Flathead | | | | | | | |
| Desert Mountain | 5600 | 54 | 8.4 | 6/01 | 8.9 | 8.7 | 8.9 |
| Marias Pass | 5250 | 54 | 6.5 | • | 6.5 | 5.8 | 5.8 |
| | 2 - 2 0 | | | -, | | | 2.0 |
| Clark Fork | | | | | | | |
| Black Pine | 7100 | 48 | 10.0 | 6/03 | 8.7 | 8.6 | 8.6 |
| Seeley Lake R. S. | 4030 | 48 | 11.9 | • | 11.6 | - | 10.8 |
| Skalkaho Summit | 7260 | 48 | 10.8 | 6/03 | 10.1 | 9.8 | 10.0 |
| D. L. | | | | | | | |
| Bitterroot Gibbons Pass | 7100 | /, 0 | 7 1 | 5/28 | 7 / | 7.0 | 7.0 |
| Lolo Pass | 7100 5250 | 48 48 | 7.1 10.6 | • | 7.4 9.9 | 9.9 | 10.0 |
| LOIU Fass | 3230 | 40 | 10.0 | 0/01 | 7.7 | フ・フ | 10.0 |
| | | | | | | | |
| MIS | SSOURI F | RIVER BA | ASIN | | | | |
| | | | | | | | |
| Beaverhead | 6700 | 4.0 | 15.0 | (101 | 16 7 | 10.0 | 1/ 0 |
| Lakeview | 6700 | 48 | 15.3 | 6/01 | 16.7 | 10.2 | 14.3 |
| Madison | | | | | | | |
| West Yellowstone | 6700 | 48 | 6.5 | 5/28 | 3.7 | 2.8 | - |
| | 5,00 | 10 | 0.5 | 3 / 20 | 3 0 7 | _,0 | |
| Gallatin | | | | | | | |
| Bridger Bowl | 7250 | 48 | | 5/27 | | | |
| College Site | 4856 | 54 | | 5/31 | | | |
| Lick Creek | 6860 | 48 | | 5/31 | | | |
| Twenty-One Mile | 7150 | 48 | 10.0 | 6/01 | 10.1 | 9.8 | 9.8 |
| Missouri Main Stem | | | | | | | |
| Kings Hill | 7420 | 48 | 11 Q | 6/01 | 10.9 | 11.3 | 10.9 |
| Stemple Pass | 6350 | 48 | 5.9 | | 5.5 | | 5.2 |
| Decimple 1405 | 0000 | 70 | J., J | 5/20 | J . J | J . L | J , L |
| Mi1k | | | | | | | |
| Beaver Creek | 3950 | 48 | | 6/01 | | | - |
| Rocky Boy | 4700 | 36 | 10.1 | 6/01 | 9.7 | - | - |
| | | | | | | | |
| Yellowstone | (000 | 4.0 | 17 (| E /07 | 15 0 | 15.0 | 15 (|
| Battle Ridge | 6020 | 48 | | 5/27 | | 15.0 | 15.6 |
| Northeast Entrance | 7350 | 48 | 9.4 | 5/28 | 9.8 | 9.7 | 9.2 |
| | | | | | | | |

⁻²⁻



RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

| | HIUQSAILU ACIE FEEL) END OF MON | | | Usable Storage | |
|-------------------|---------------------------------|--------------------|-----------|----------------|---------|
| Basin or Stream | RESERVOIR | Usable Capacity | This Year | Last Year | Average |
| | | | | | |
| COLUMBIA RIVER BA | ASIN | | | | |
| Flathead | Hungry Horse | 3,428.0 | 2,428.0 | 2,748.0 | 2,632.0 |
| | Flathead Lake | 1,791.0 | 1,411.0 | 1,469.0 | 1,494.0 |
| | Camas (4) | 45.2 | | 31.0 | |
| | Mission Valley (8) | 100.3 | | 88.4 | 63.1 |
| Clark Fork | Georgetown Lake | 31.0 | 27.8 | 26.8 | 24.2 |
| | Nevada Creek | 12.6 | | - | 11.8 |
| | Noxon Rapids | 334.6 | 290.8 | _ | 220.7 |
| Bitterroot | Como | 34.9 | 22.6 | 36.4 | |
| | Painted Rocks | 31.7 | 33.4 | 33.3 | 32.6 |
| MISSOURI RIVER BA | ASIN | | | | |
| Beaverhead | Clark Canyon | 328.9 | 167.3 | 158.8 | 127.7 |
| Deavernead | Lima | 84.0 | 81.6 | 76.7 | 50.9 |
| Darbar | | 38.8 | | - | 37.3 |
| Ruby Madison | Ruby | | 38.8 | | 278.4 |
| Madison | Hebgen Lake | 377.5 | 331.6 | | |
| 0-11 | Ennis Lake | 41.0 | 33.9 | 37.7 | 35.7 |
| Gallatin | Middle Creek | 8.0 | 5.3 | 7.8 | 6.7 |
| Missouri | Canyon Ferry | 2,043.0 | 1,542.0 | • | • |
| | Hauser & Helena | 61.9 | 59.0 | | 57.3 |
| | Lake Helena | 10.4 | | | |
| | Holter Lake | 81.9 | 66.4 | 76.7 | |
| • | Smith River | 10.7 | | 11.4 | |
| | Durand | 7.0 | | 7.0 | 6.4 |
| | Martinsdale | 23.1 | | 17.9 | |
| | Deadman's Basin | 72.2 | | 48.7 | |
| | Fort Peck | 19,410.0 | • | 17,270.0 | * |
| Sun | Gibson | 105.0 | | 104.4 | |
| | Willow Creek | 32.3 | 31.1 | | |
| | Pishkun | 32.0 | 31.7 | | |
| Marias | Lower Two Medicine | 16.6 | | | |
| | Four Horns | 19.2 | 12.5 | 12.4 | 12.9 |
| | Swift | 30.0 | 30,3 | 30.1 | 28.3 |
| | Lake Frances | 112.0 | 101.2 | 92.7 | 98.2 |
| | Tiber | 1,347.0 | | 598.7 | 742.0 |
| Milk | Fresno | 127.2 | 123.8 | 99.4 | 109.5 |
| | Nelson | 66.8 | 56.8 | 53.0 | 46.9 |
| | Lake Sherburne | 66.1 | | 55.3 | 28.3 |
| Yellowstone | Mystic Lake | 20.8 | 6.0 | 8.9 | |
| | Tongue River | 68.0 | | 59.5 | |
| | Cooney | 27.5 | | 19.3 | |
| Big Horn | Yellowtail | 1,356.0 | 999.4 | 886,8 | |
| | | | | | |



COLUMBIA RIVER BASIN

KOOTENAI RIVER

| Bald Eagle Peak | 5700 | 5/25 | 85 | 45.1 | 31.3 | - |
|--------------------------|------|------|----|------|------|------|
| Banfield Mountain | 5600 | 5/27 | 14 | 7.4 | 0.0 | - |
| Banfield Mountain Pillow | 5600 | 5/27 | SP | 5.3 | 0.0 | - |
| Bristow Creek | 3900 | 5/27 | 0 | 0.0 | 0.0 | - |
| Cedar Grove | 4100 | 5/25 | 0 | 0.0 | 0.0 | ~ |
| Davis Creek | 5400 | 5/26 | 0 | 0.0 | 0.0 | - |
| Garver Creek | 4250 | 5/26 | 0 | 0.0 | 0.0 | - |
| Garver Creek Pillow | 4250 | 5/26 | SP | 0.0 | 0.0 | - |
| Glacier | 4100 | 5/26 | 22 | 11.1 | 6.3 | 11.2 |
| Graves Creek | 4300 | 5/28 | 0 | 0.0 | 0.0 | 0.8 |
| Gray Creek | 5100 | 5/29 | 0 | 0.0 | 300 | 11.3 |
| Hawkins Lake | 6450 | 5/26 | 36 | 17.0 | 13.5 | |
| Hawkins Lake Pillow | 6450 | 5/26 | SP | 18.1 | 18.3 | - |
| Kicking Horse | 5400 | 6/01 | 0 | 0.0 | - | - |
| Lost Soul | 4800 | 5/27 | 0 | 0.0 | 0.0 | ento |
| Marble Canyon | 5000 | 5/29 | 0 | 0.0 | - | 1.0 |
| Morrissey Ridge | 6100 | | | | - | 13.0 |
| Poorman Creek | 5100 | 5/25 | 26 | 12.9 | 0.0 | - |
| Poorman Creek Pillow | 5100 | 5/25 | SP | 4.0 | 0.1 | _ |
| Red Mountain | 6000 | 5/27 | 10 | 5.2 | 0.0 | 5.6 |
| Stahl Peak | 6050 | 5/28 | 49 | 26.9 | 16,8 | - |
| Weasel Divide | 5450 | 5/28 | 28 | 14,4 | 3,6 | 19.7 |
| | | | | | | |

SP - Snow pillow observation - water content only.



| N | | | THIS YEAR | Y | PAST R | ECORD |
|-----------------------------------|-----------|-----------|------------|---------------|-------------|--------------|
| DRAINAGE BASIN and/or SNOW COURSE | - | Date | Snow Depth | Water Content | Water Conte | ent (inches) |
| NAME | Elevation | of Survey | (Inches) | (inches) | Last Year | Average |
| | | | | | | |
| FLATHEAD RIVER | | | | | | |
| Big Creek | 6750 | 6/01 | 91 | 47.4 | 28,2 | 42.7 |
| Desert Mountain | 5600 | 6/01 | 0 | 0.0 | 0.0 | 0.7 |
| Fatty Creek | 5500 | 6/01 | 25 | 12.8 | 0.0 | 7.2 |
| Hell Roaring Divide | 5770 | 6/01 | 0 | 0.0 | 3.1 | 13.5 |
| North Fork Jocko | 6330 | 6/02 | 63 | 34.2 | 9.4 | 30.7 |
| CLARK FORK RIVER | | | | | | |
| Black Pine | 7100 | 6/03 | 0 | 0.0 | 0.0 | 4.1 |
| Black Pine Pillow | 7100 | 6/03 | SP | 1.9 | 0.0 | 5.0 |
| Heart Lake Trail | 4800 | 5/28 | 7 | 3.0 | 0.0 | - |
| Hoodoo Basin | 6000 | 5/28 | 76 | 37.8 | 24.9 | - |
| Hoodoo Basin Pillow | 6000 | 5/28 | SP | 34.4 | - | - |
| Hoodoo Creek | 5900 | 5/28 | 74 | 36.5 | 24.6 | 32.0 |
| Intergaard | 6450 | 6/01 | 0 | 0.0 | - | - |
| Lookout | 5250 | 6/01 | 42 | 20.7 | 16.6 | 13.9 |
| Skalkaho Summit | 7260 | 6/03 | 33 | 16.4 | 0.0 | 16.8 |
| Stuart Mountain | 7400 | 6/01 | 54 | 26.0 | - | 18.0 |
| TV Mountain | 6800 | 6/01 | 32 | 13.8 | - | - |
| BITTERROOT RIVER | | | | | | |
| Gibbons Pass | 7100 | 5/29 | 30 | 14.9 | 0.9 | 7.6 |
| Lost Horse | 5940 | 5/30 | 57 | 26.8 | 10.2 | 18.5 |
| Saddle Mountain | 7940 | 5/29 | 51 | 24.5 | 13.6 | 18.0 |
| Saddle Mountain Pillow | 7940 | 5/29 | SP | 26.8 | 10.8 | _ |
| Twelvemile Creek | 5600 | 5/30 | 0 | 0.0 | 0.0 | - |
| | | - 1 | | | 0 0 | |

5/30

5/30

5/30

5600

6510

6510

0.0

36,6

34.1

0.0

15.6

12.8

32.2

SP

74

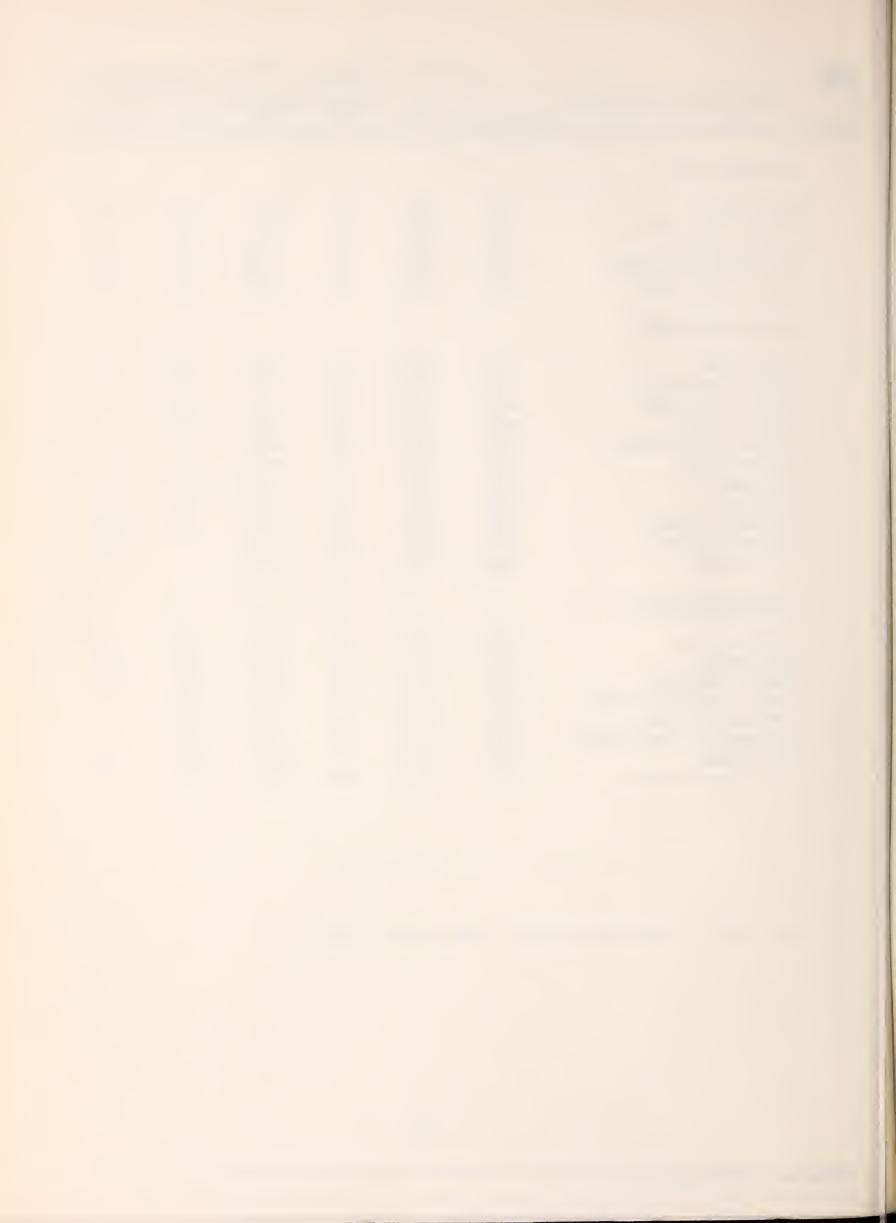
SP

Twelvemile Creek Pillow

Twin Lakes Pillow

Twin Lakes

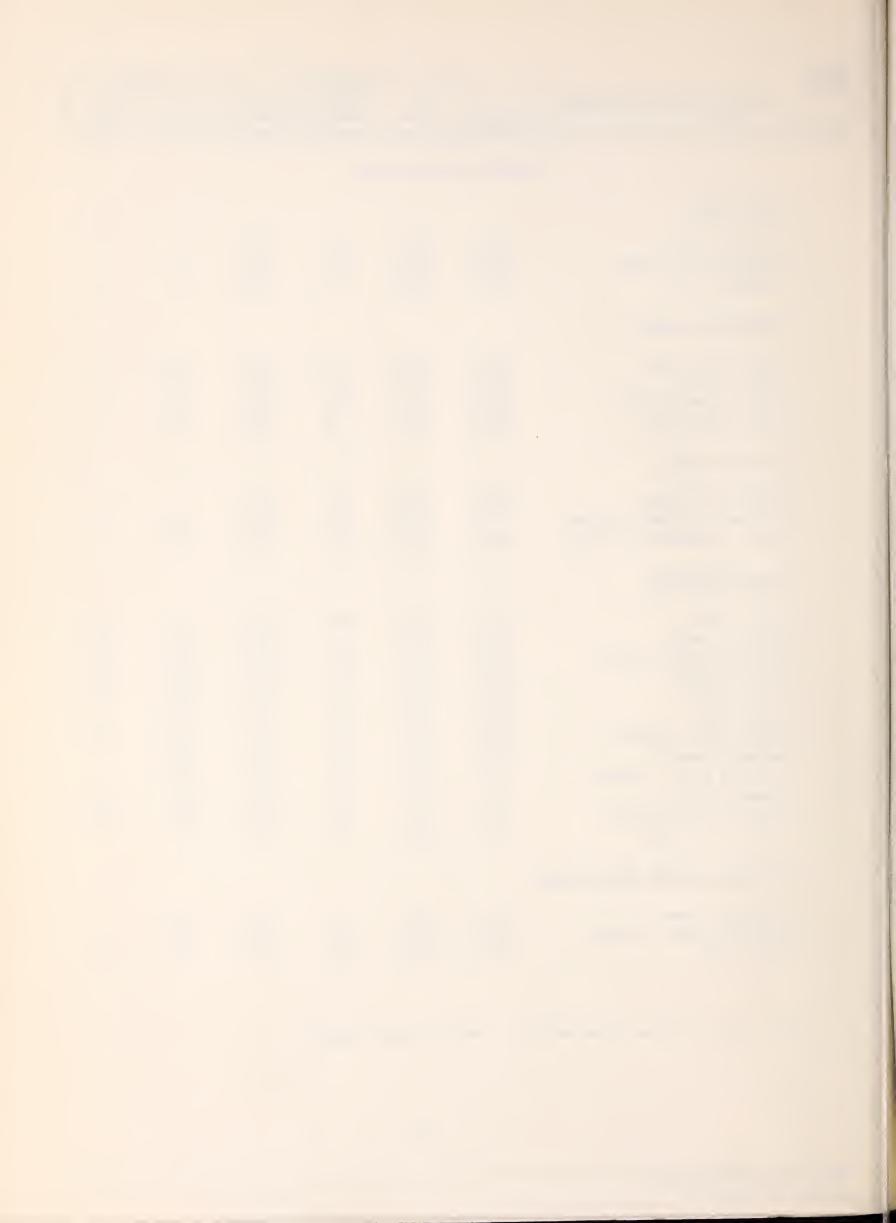
SP - Snow pillow observation - water content only.



| SNO | W | | | THIS YEAR | | PAST R | ECORD |
|-----|-----------------------------------|-----------|-------------------|------------|---------------|------------------------|---------|
| | DRAINAGE BASIN and/or SNOW COURSE | | Date of Survey | Snow Depth | Water Content | Water Content (inches) | |
| | NAME | Elevation | of Survey | (Inches) | (Inches) | Last Year | Average |

| <u>M</u> | ISSOURI R | IVER BAS | IN | | | |
|---|--|------------------------------|----------------|---|--------------------|---|
| RUBY RIVER | | | | | | |
| Branham Lakes Middle Mill Creek Smuggler Mine | 8850 7850 6960 | 6/01 6/01 6/01 | | 38.4 12.4 0.0 | - | - - - |
| JEFFERSON RIVER | | | | | | |
| Copper Mountain Rocker Peak Rocker Peak Pillow Uncle Sam Gulch | 7700 8000 8000 6500 | 6/01 | | 0.0 12.9 18.0 0.0 | 7.7 | - - - |
| MADISON RIVER | | | | | | |
| Madison Plateau Madison Plateau Pillow West Yellowstone Pillow | 7750 7750 6700 | 5/28 5/28 5/28 | 29 SP SP | 14.3 14.7 0.0 | 1.2 0.0 | - - - |
| GALLATIN RIVER | | | | | | |
| Arch Falls Bridger Bowl Bridger Bowl Pillow Devils Slide Hood Meadow Lick Creek Lick Creek Pillow Maynard Creek Maynard Creek Pillow Shower Falls Shower Falls Pillow Twenty-One Mile | 7350 7250 7250 8100 6600 6860 6210 6210 8100 8100 7150 | 5/27 5/27 5/27 5/27 | 75 16 | 16.8 34.4 35.4 34.4 5.8 4.9 4.7 13.5 15.6 39.3 37.0 3.7 | 0.0 11.6 0.0 | 8.9 20.8 15.3 23.0 1.5 0.0 0.0 - 25.6 22.2 |
| MISSOURI RIVER (Main Stem | <u>)</u> | | | | | |
| Deadman Creek Deadman Creek Pillow Kings Hill | 6450 6450 7500 | 6/01 6/01 6/01 | 0 SP 41 | 0.0 0.0 18.6 | 0.0 0.0 0.0 | - - 10.3 |

SP - Snow pillow observation - water content only.



| | (| | | Y | PAST RECORD | |
|-----------------------------------|-----------|-----------|------------|---------------|------------------------|---------|
| DRAINAGE BASIN and/or SNOW COURSE | | Date | Snow Depth | Water Content | Water Content (inches) | |
| NAME | Elevation | of Survey | (Inches) | (Inches) | Last Year | Average |
| JUDITH RIVER | | | | | | |
| Avalanche | 7100 | 6/01 | 88 | 41.2 | *** | _ |
| Crystal Lake | 6100 | 6/01 | 36 | 15.1 | - | *** |
| Rock Creek | 5600 | 6/01 | 0 | 0.0 | - | - |
| Spur Park | 8000 | 6/01 | 60 | 26.8 | 1.2 | 19. |
| Spur Park Pillow | 8000 | 6/01 | SP | 26.9 | 0.2 | - |
| UPPER YELLOWSTONE RIVER | | | | | | |
| Camp Senia | 7890 | 6/02 | 22 | 9.1 | 0.0 | 5. |
| Cooke Station | 8150 | 5/28 | 36 | 17.3 | 0.0 | _ |
| Fisher Creek | 9100 | 5/28 | 83 | 40.2 | 24.5 | ~ |
| Fisher Creek Pillow | 9100 | 5/28 | SP | 38.0 | 19.2 | - |
| Grizzly Peak | 8400 | 6/01 | 75 | 30.4 | - | |
| Independence | 7850 | 6/03 | 13 | 5.6 | - | - |
| Monument Peak | 8800 | 6/03 | 40 | 20.0 | 40 | - |
| Northeast Entrance | 7400 | 5/28 | 2 | 1.2 | 0.0 | - |
| Northeast Entrance Pillow | 7350 | 5/28 | SP | 0.1 | 0.0 | *** |
| 0 - ' | 6550 | F / O 7 | 1.0 | 0 0 | | |

6550

8850

8700

5/27

6/02

5/28

19

54

59

8.8

21.1

28.7

0.0

13.5

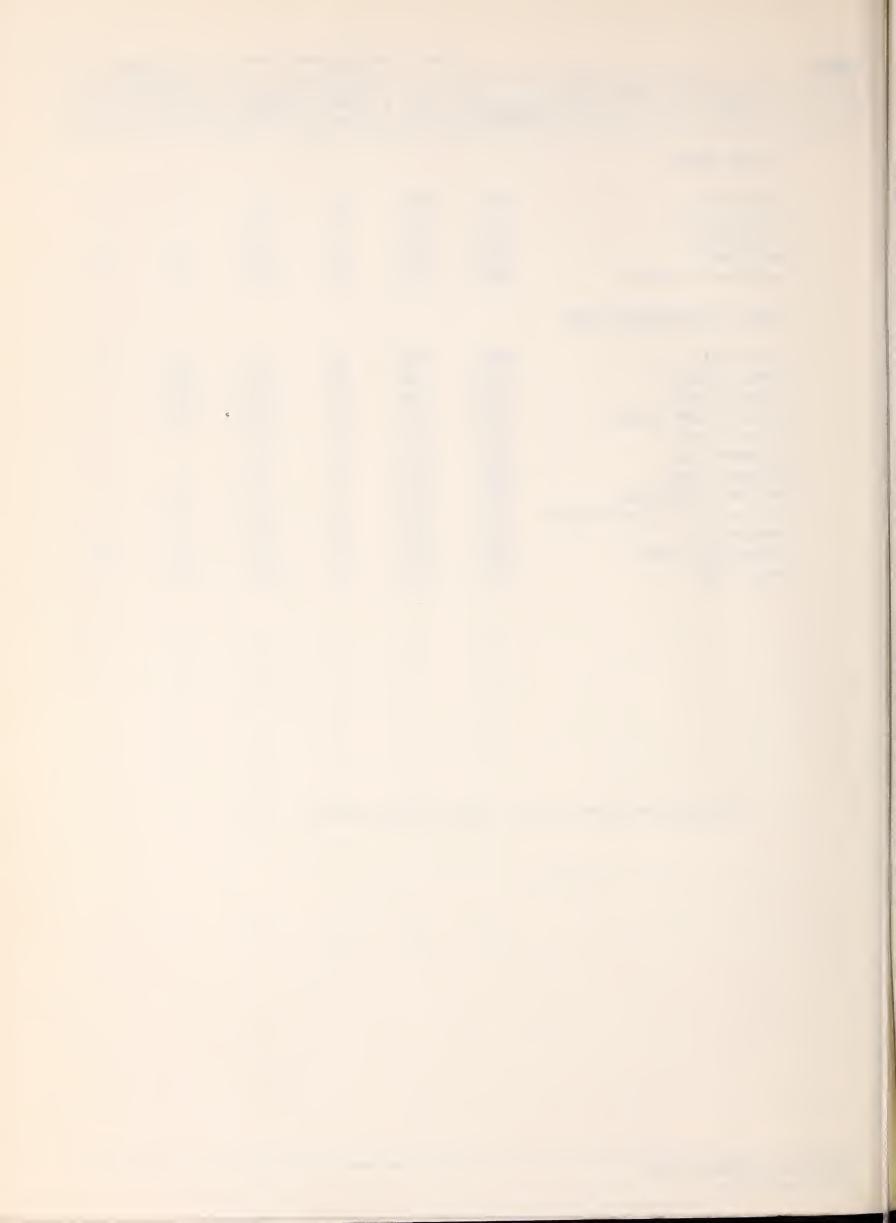
13.5

Sacajawea

White Mill

Timberline Creek

SP - Snow pillow observation - water content only.



| • | SNOW | | | THIS YEAR | | PAST R | ECORD |
|---|-----------------------------------|-----------|-----------|------------|---------------|-------------|--------------|
| ſ | DRAINAGE BASIN and/or SNOW COURSE | | Date | Snow Depth | Water Content | Water Conte | ent (inches) |
| I | NAME | Elevation | of Survey | (Inches) | (Inches) | Last Year | Average |

SUPPLEMENTAL MEASUREMENTS AND CORRECTIONS TO PREVIOUSLY PUBLISHED 1970 DATA

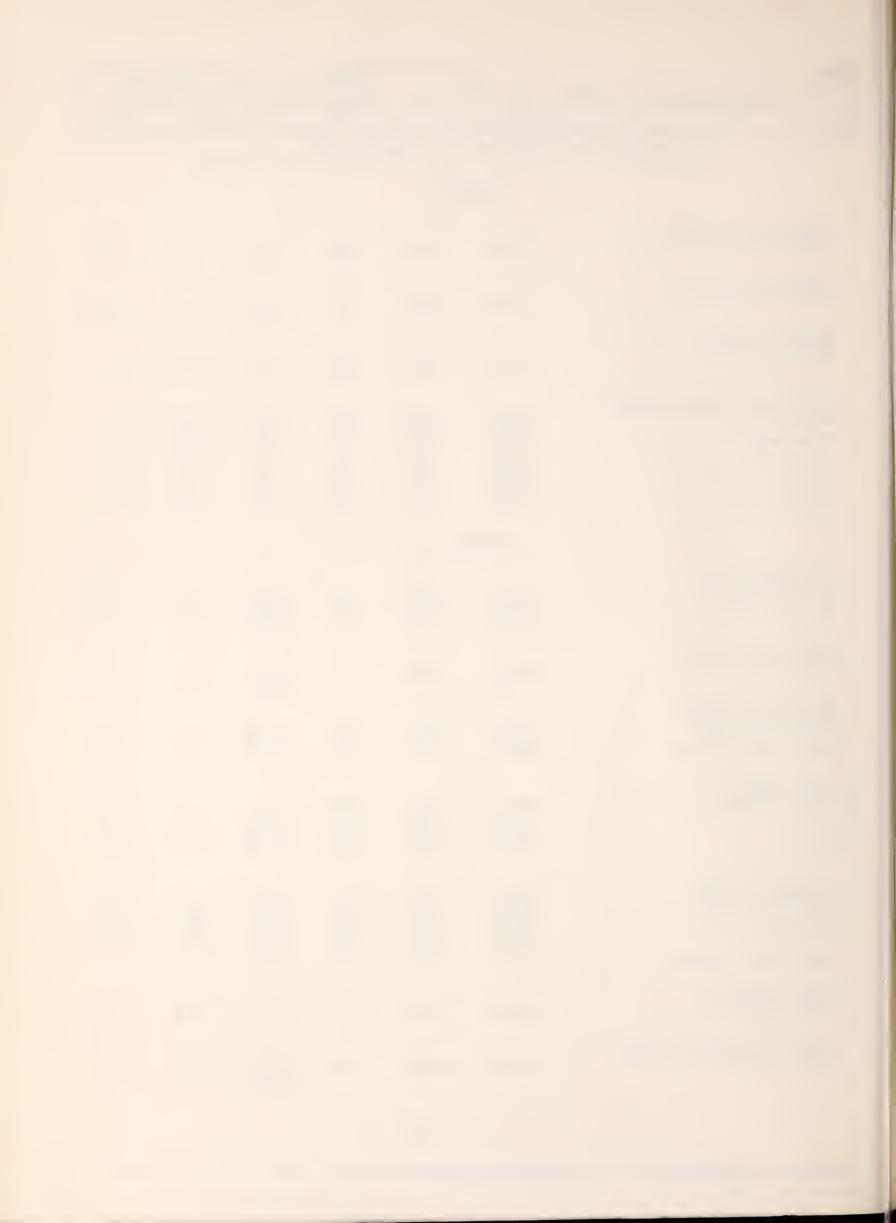
| January 1 | | | | | | | | | |
|--|--|--|------------------------------------|--|--|--|--|--|--|
| Kootenai River Banfield Mountain Bristow Creek Lost Soul | 5600 3900 4800 | 1/13 1/13 1/13 | 30 22 27 | 7.0 4.8 5.8 | 16.5 9.9 11.1 | - - | | | |
| Madison River Madison Plateau | 7750 | 1/7 | 35 | 9.1 | - | - | | | |
| Gallatin River Carrot Basin | 9000 | 1/12 | 52 | 14.9 | 19.7 | - | | | |
| Judith River Spur Park | 8000 | 1/8 | 42 | 11.4 | 10.4 | - | | | |
| Milk River Bear Paw Ski Area Rocky Boy | 5200 4700 | 1/7 1/7 | 19 13 | 4.2 2.1 | - 1.1 | - - | | | |
| Upper Yellowstone River Cooke Station Fisher Creek White Mill | 8150 9100 8700 | 1/14 1/14 1/14 | 41 70 55 | 9.2 17.8 13.4 | - - - | - - - | | | |
| | Februa | ry 1 | | | | | | | |
| Gallatin River Twenty-One Mile | 7150 | 2/04 | <u>47</u> | 11.4 | 21.8 | 11.9 | | | |
| Upper Yellowstone River Northeast Entrance | 7400 | 2/01 | <u>35</u> | 8.4 | 8,6 | 6.0 | | | |
| | March | 1 | | | | | | | |
| Kootenai River Baree Creek Baree Midway | 5500 4600 | 3/01 3/01 | 105 94 | $\frac{37.6}{31.3}$ | 47.6 35.9 | 43.5 - | | | |
| Flathead River Beaver Lake Gunsight Lake Spotted Bear Mountain Trinkus Lake Twin Creeks Upper Holland Lake | 5900 6300 7000 6100 3580 6200 | 3/10 3/10 3/10 3/10 3/10 3/10 | 67 102 49 121 40 91 | 22.4 38.0 17.2 44.2 13.7 32.2 | 23.2 38.6 14.4 41.5 14.2 35.6 | 20.0 36.0 13.6 37.0 11.3 30.4 | | | |



| S | NOW | | | THIS YEAR | | PAST R | ECORD | 1 |
|---|-----------------------------------|-----------|-----------|------------|---------------|-------------|-------------|---|
| Г | DRAINAGE BASIN and/or SNOW COURSE | | Date | Snow Depth | Water Content | Water Conte | nt (inches) | |
| r | NAME | Elevation | of Survey | (Inches) | (Inches) | Last Year | Average | |

SUPPLEMENTAL MEASUREMENTS AND CORRECTIONS (Continued)

| March 1 | | | | | | | | |
|-------------------------|-------|------|-----------|-------|------|------|--|--|
| Clark Fork River | | | | | | | | |
| Lubrecht Forest No. 3 | 5450 | 3/02 | <u>25</u> | 5.7 | 9.6 | 6.6 | | |
| Bitterroot River | | | | | | | | |
| Gibbons Pass | 7100 | 2/24 | 54 | 18.8 | 26.9 | 19.5 | | |
| Madison River | | | | | | | | |
| Lion Mountain | 8760 | 2/25 | <u>50</u> | 13.5 | 27.8 | - | | |
| Sun-Teton-Marias Rivers | | | | | | | | |
| Badger Pass | 6900 | 3/10 | 100 | 35.5 | 38.9 | 31.8 | | |
| Blue Lake | 5900 | 3/10 | 65 | 23.4 | 28.9 | - | | |
| Five Bull | 5 700 | 3/10 | 27 | 7.0 | 9.3 | 5.7 | | |
| Freight Creek | 6000 | 3/10 | 38 | 11.5 | 14.2 | 14.1 | | |
| Wrong Creek | 5700 | 2/28 | 39 | 10.8 | 13.5 | 14.3 | | |
| April 1 | | | | | | | | |
| Flathead River | | | | | | | | |
| Marias Pass | 5250 | 3/26 | 67 | 20.2 | 17.0 | 18.8 | | |
| Mineral Creek | 4000 | 4/01 | 58 | 19.2 | 19.7 | 21.4 | | |
| Clark Fork River | | | | | | | | |
| Cotter Mine | 6250 | 4/06 | 51 | 20,6 | 21.8 | 17.2 | | |
| Beaverhead River | | | | | | | | |
| Dad Creek Lake | 8400 | 4/01 | 53 | 15.3E | 17.6 | 13.0 | | |
| White Pine Ridge | 8850 | 4/01 | 22 | 5.6E | 5.8 | 5,2 | | |
| Ruby River | | | | | | | | |
| Clover Meadow | 8600 | 4/01 | 68 | 21.1E | 19.7 | 16.0 | | |
| Divide | 7900 | 4/01 | 42 | 11.9E | 16.2 | 9.7 | | |
| Notch | 8500 | 4/01 | 68 | 20.3E | 19.6 | 13.6 | | |
| Big Hole River | | | | | | | | |
| Abundance Lake | 8800 | 4/01 | 72 | 23.0E | 14.4 | 19.8 | | |
| Darkhorse Lake | 8600 | 4/01 | 89 | 29.5E | 30.6 | 27.0 | | |
| Foolhen | 8280 | 4/01 | 60 | 18.5E | 20.1 | 17.8 | | |
| Slag-A-Melt Lake | 8750 | 4/01 | 92 | 30.4E | 29.8 | - | | |
| Madison River | | | | | | 1.0 | | |
| Call Road | 8050 | 4/01 | 51 | 14.7E | 10.9 | 10.8 | | |
| Sun-Teton-Marias Rivers | | | 0.0 | 11 0 | 10 / | 11 7 | | |
| Goat Mountain | 7000 | 4/05 | 36 | 11.0 | 13.4 | 11.7 | | |



| SNOW | | THIS YEAR | | | PAST RECORD | |
|-----------------------------------|-----------|-----------|----------|---------------|------------------------|---------|
| DRAINAGE BASIN and/or SNOW COURSE | | Date | | Water Content | Water Content (inches) | |
| NAME | Elevation | of Survey | (Inches) | (Inches) | Last Year | Average |

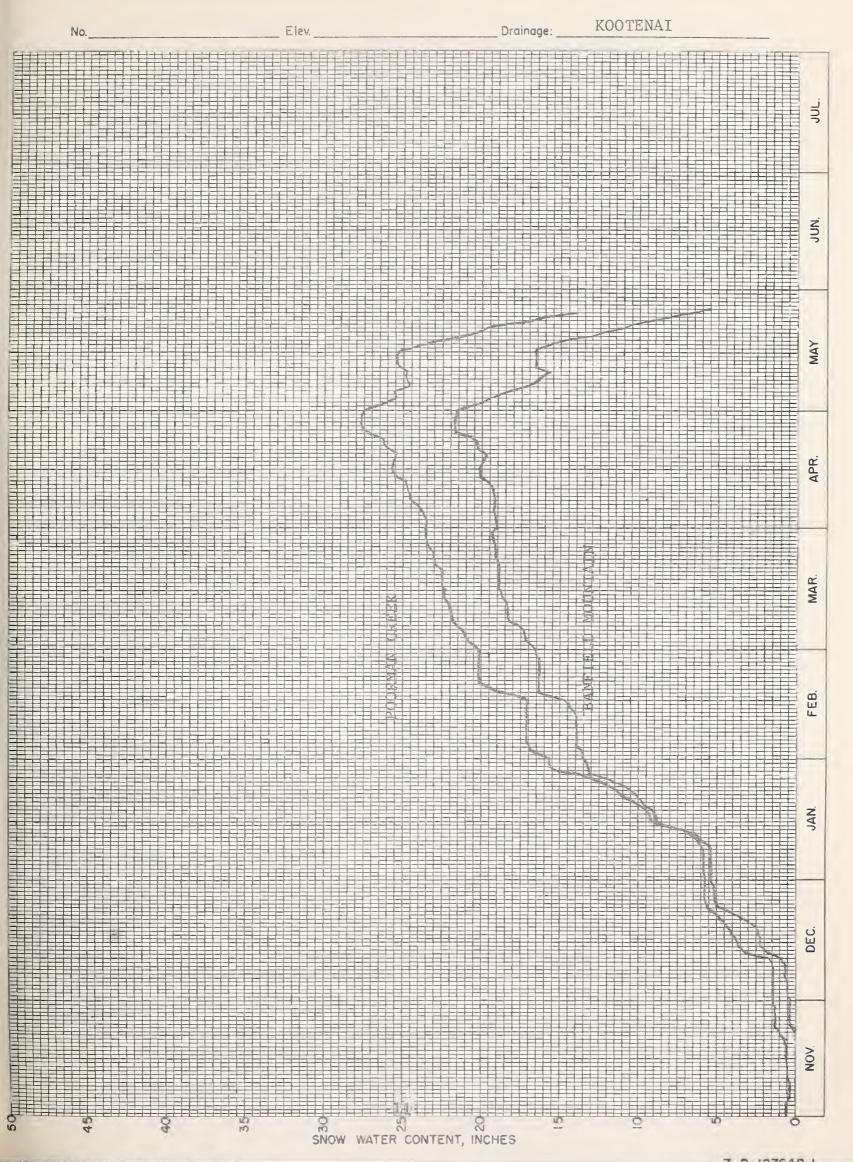
SUPPLEMENTAL MEASUREMENTS AND CORRECTIONS (Continued

| $\underline{\text{May 1}}$ | | | | | | | | |
|--|--------------|--------------|----------|---------------|--------------|------------------|--|--|
| Beaverhead River Lakeview Canyon Lakeview Ridge | 6930 7400 | 5/05 5/05 | 36 32 | 11.7 10.3 | 20.4 | 10.7 | | |
| Missouri River (Main Stem) Stemple Pass | 6600 | 5/01 | 50 | 12.3 | 6.8 | 10.8 | | |
| Upper Yellowstone River Cooke Station South Fork Shields | 8150 8100 | 4/30 5/04 | 76 97 | 27.7E 37.4 | 18.8 20.2 | - 27.2 | | |
| <u>May 15</u> | | | | | | | | |
| Clark Fork River Intergaard TV Mountain | 6450 6800 | 5/15 5/14 | 30 75 | 9.4 25.1 | - - | - - | | |
| Ruby River Smuggler Mine | 6960 | 5/17 | 29 | 11.0 | ~ | - | | |
| Jefferson River Nez Perce Creek | 6500 | 5/14 | 19 | 8.1 | - | - | | |
| Missouri River (Main Stem) Elk Peak | 8000 | 5/13 | 76 | 28.6 | _ | - | | |

E - Estimated data.



SNOW PILLOW DATA WATER YEAR 1970

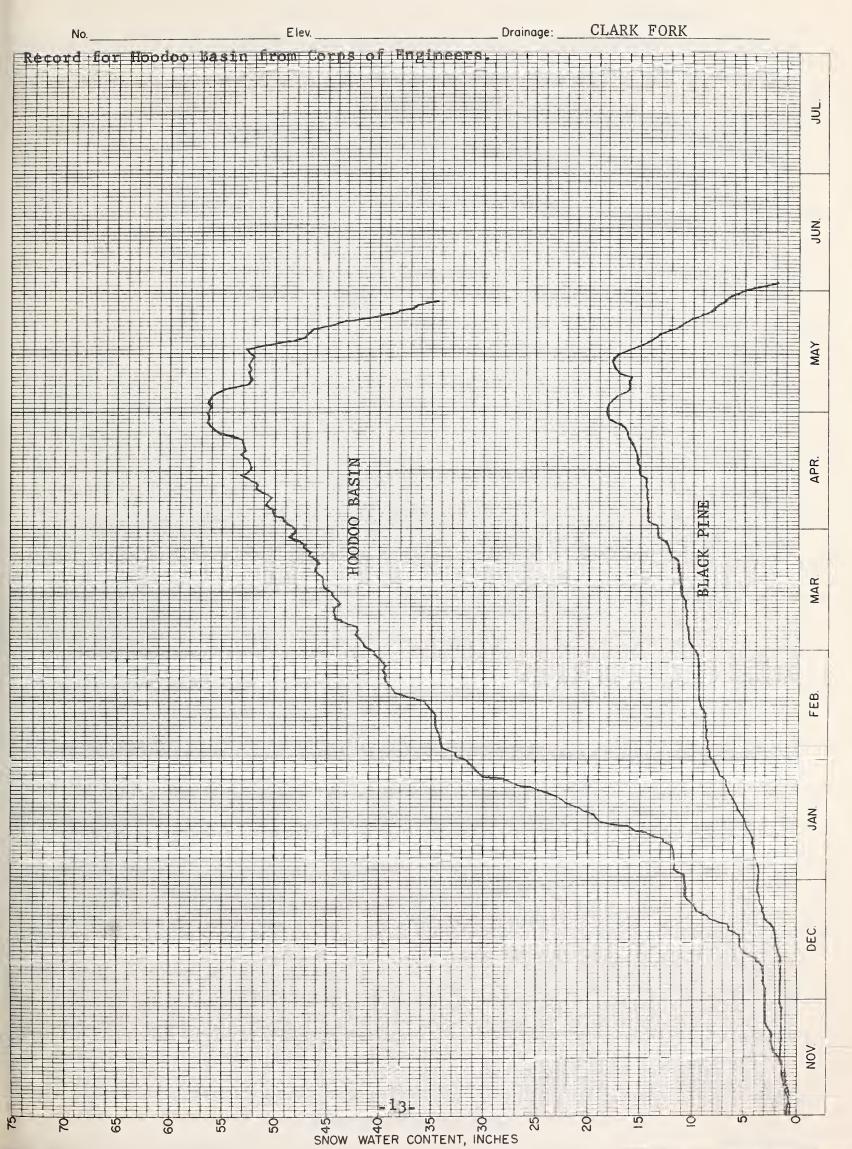


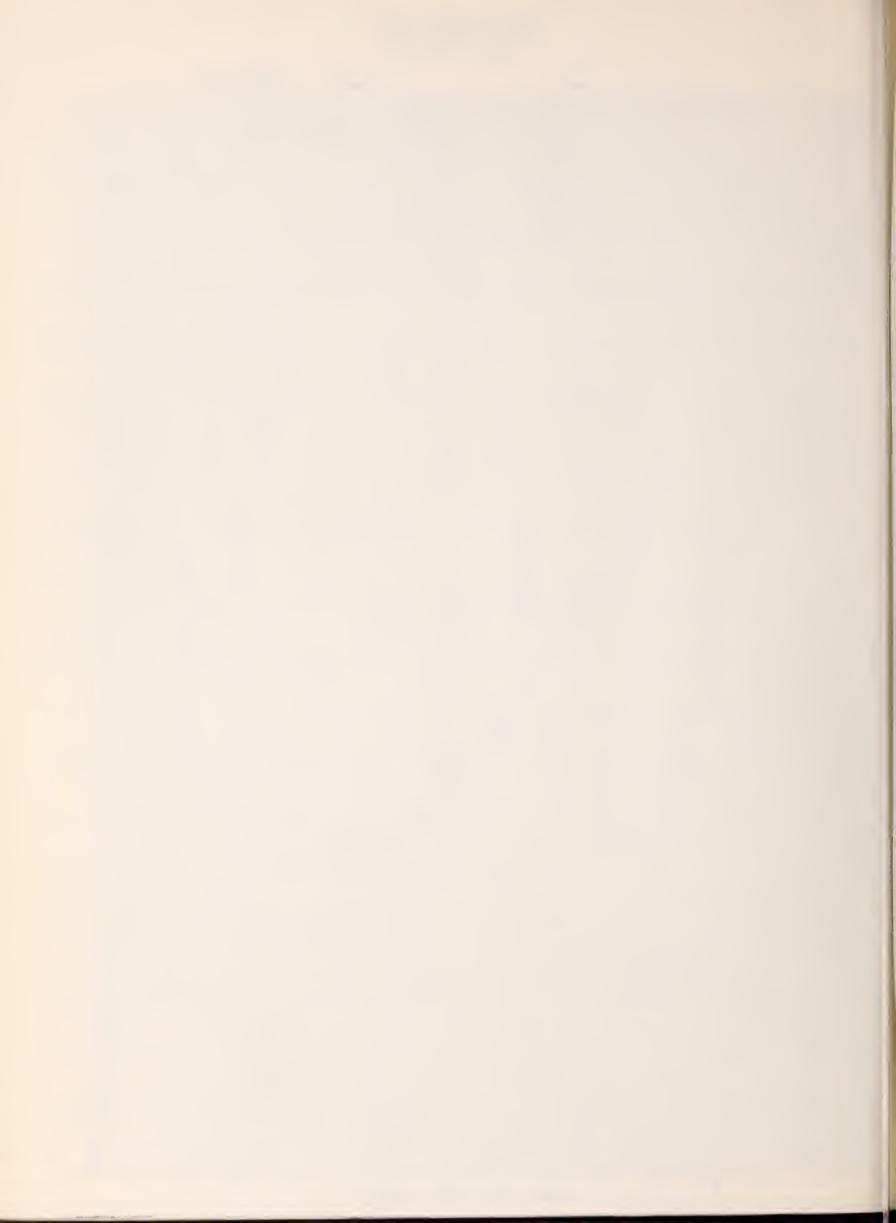


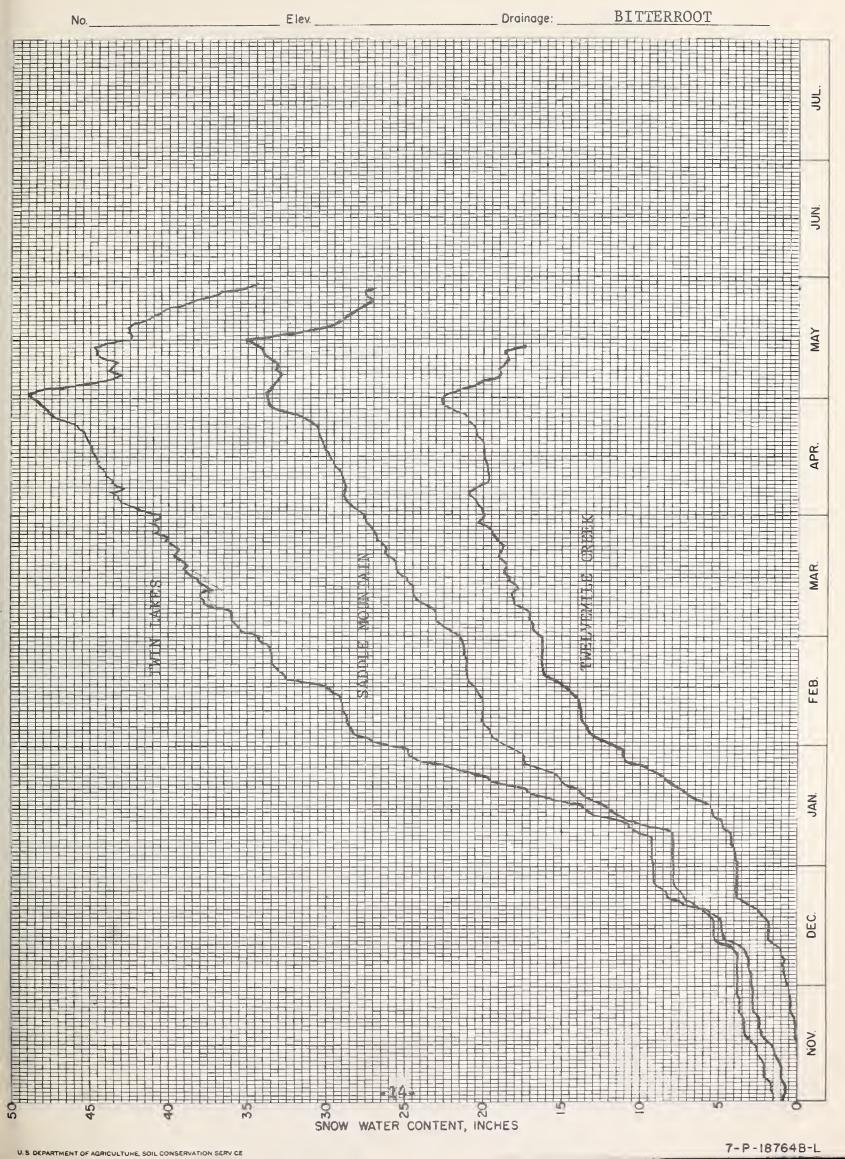
Drainage: KOOTENAI No. Elev. MAY SNOW WATER CONTENT, INCHES

7-P-18764

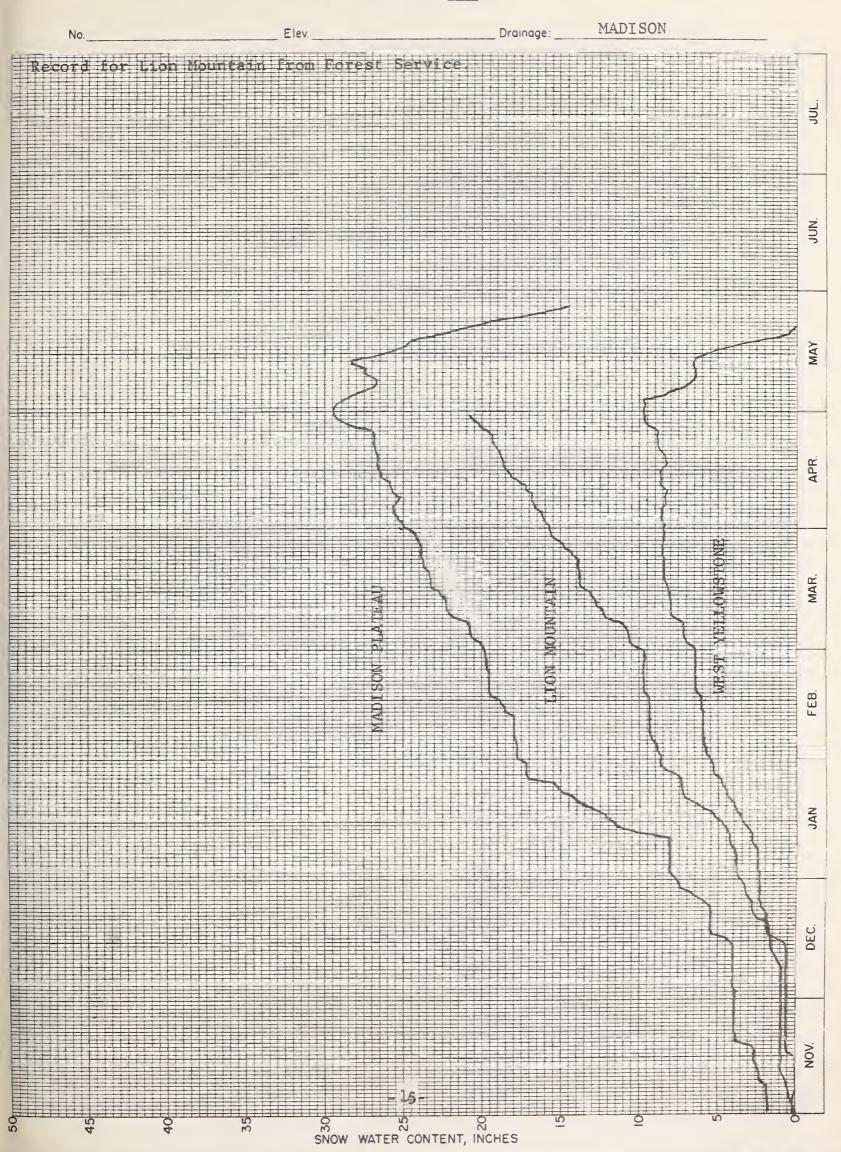








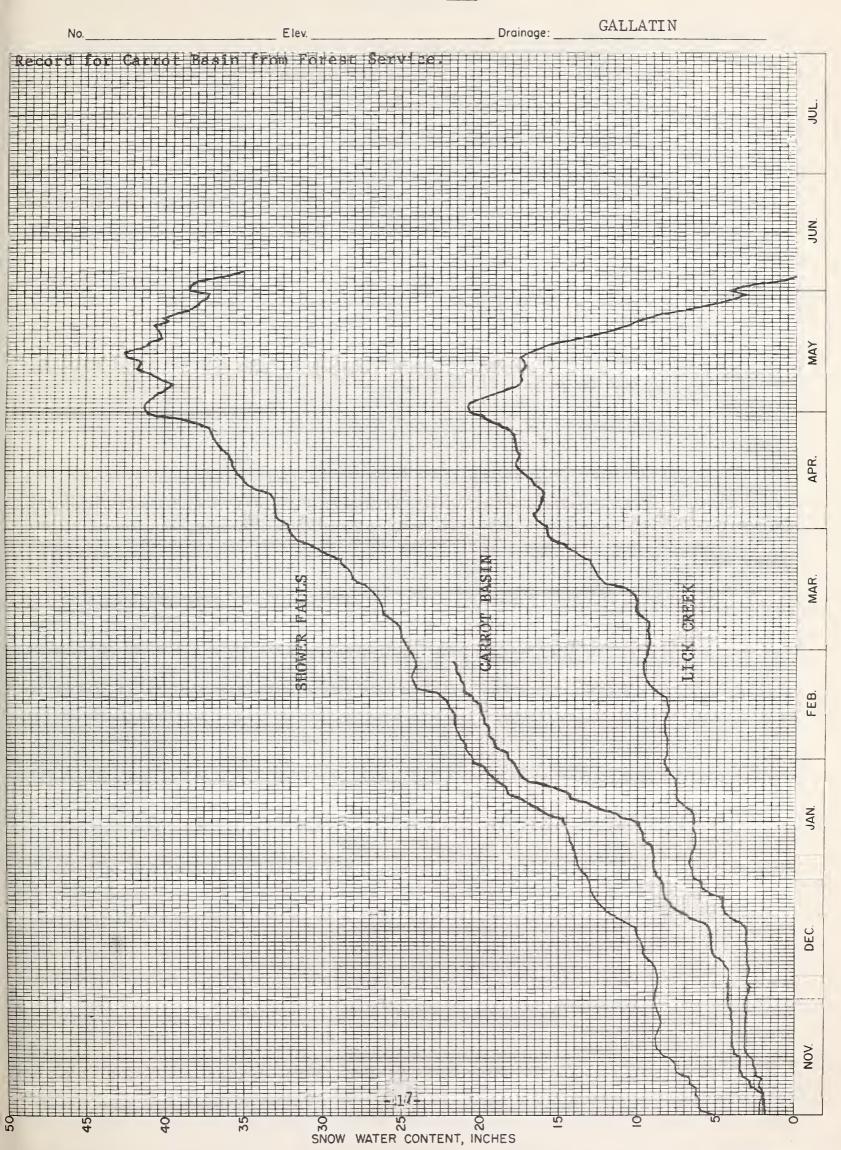




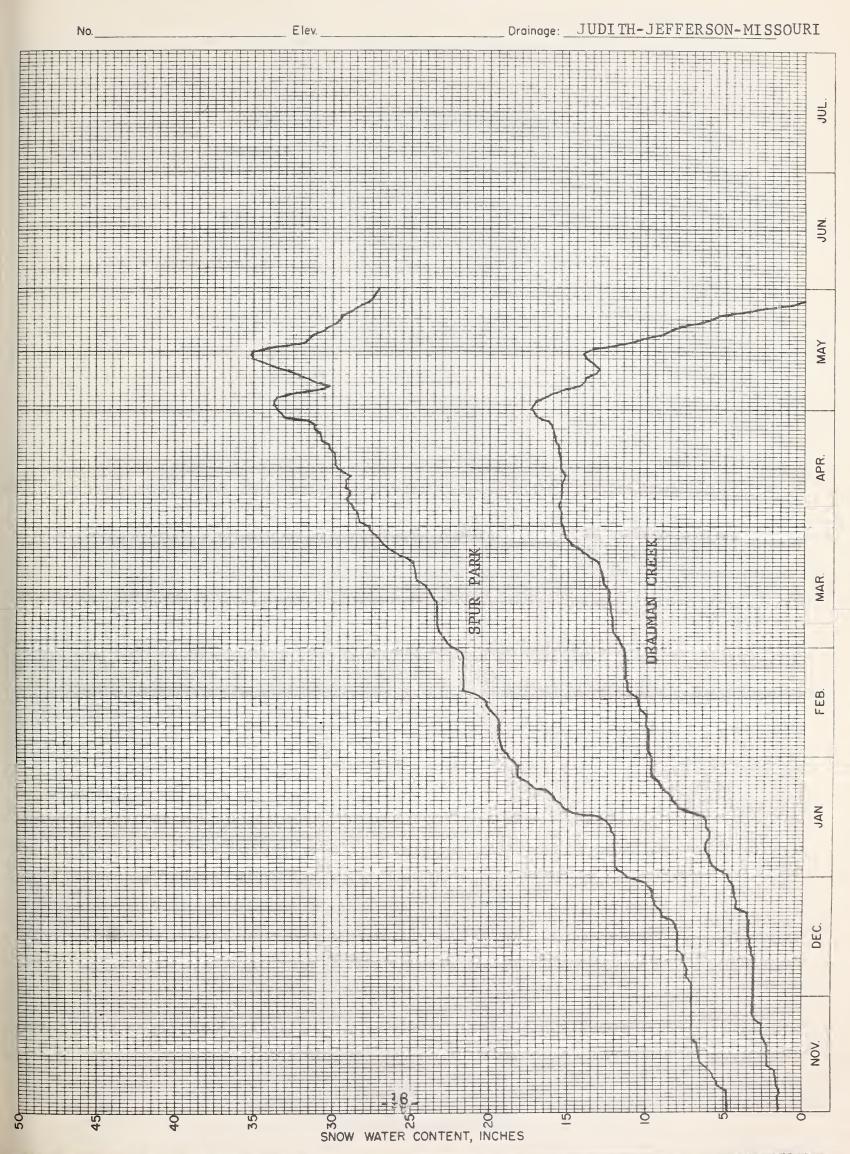


GALLATIN Drainage: __ No. SNOW WATER CONTENT, INCHES

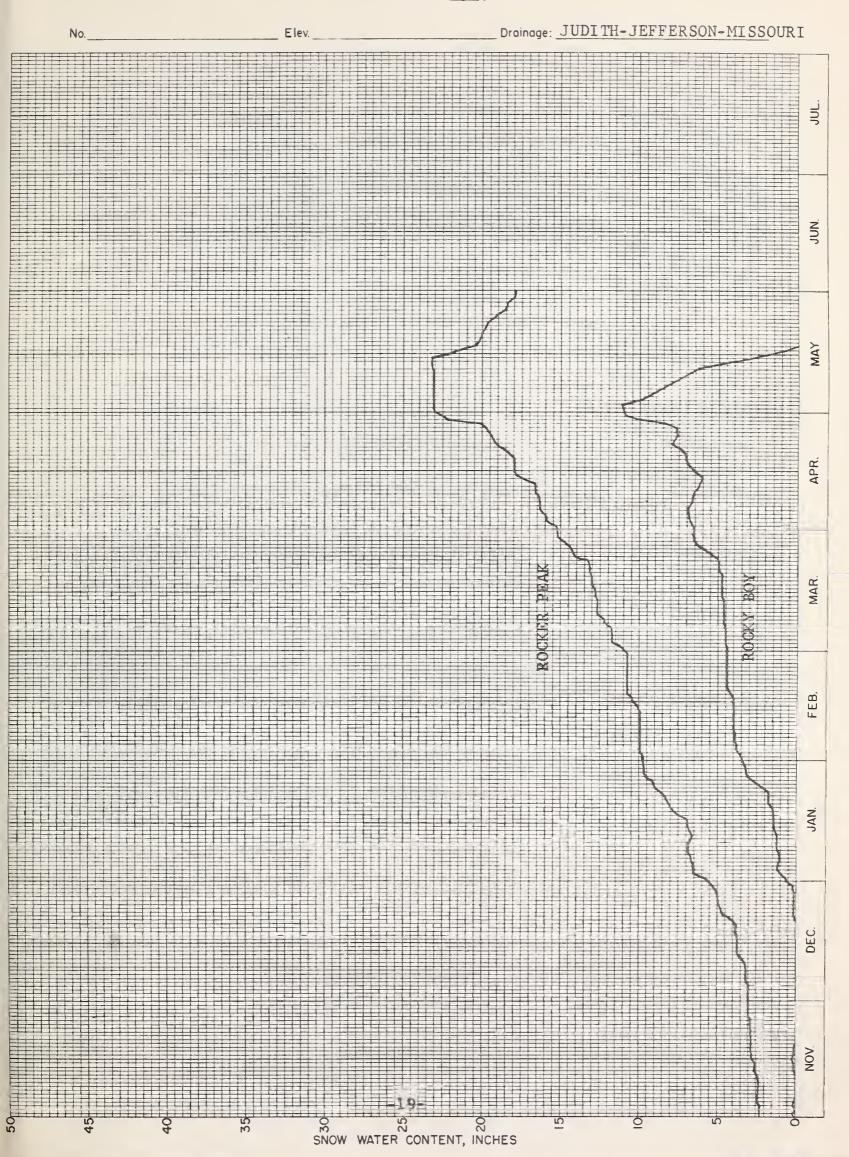




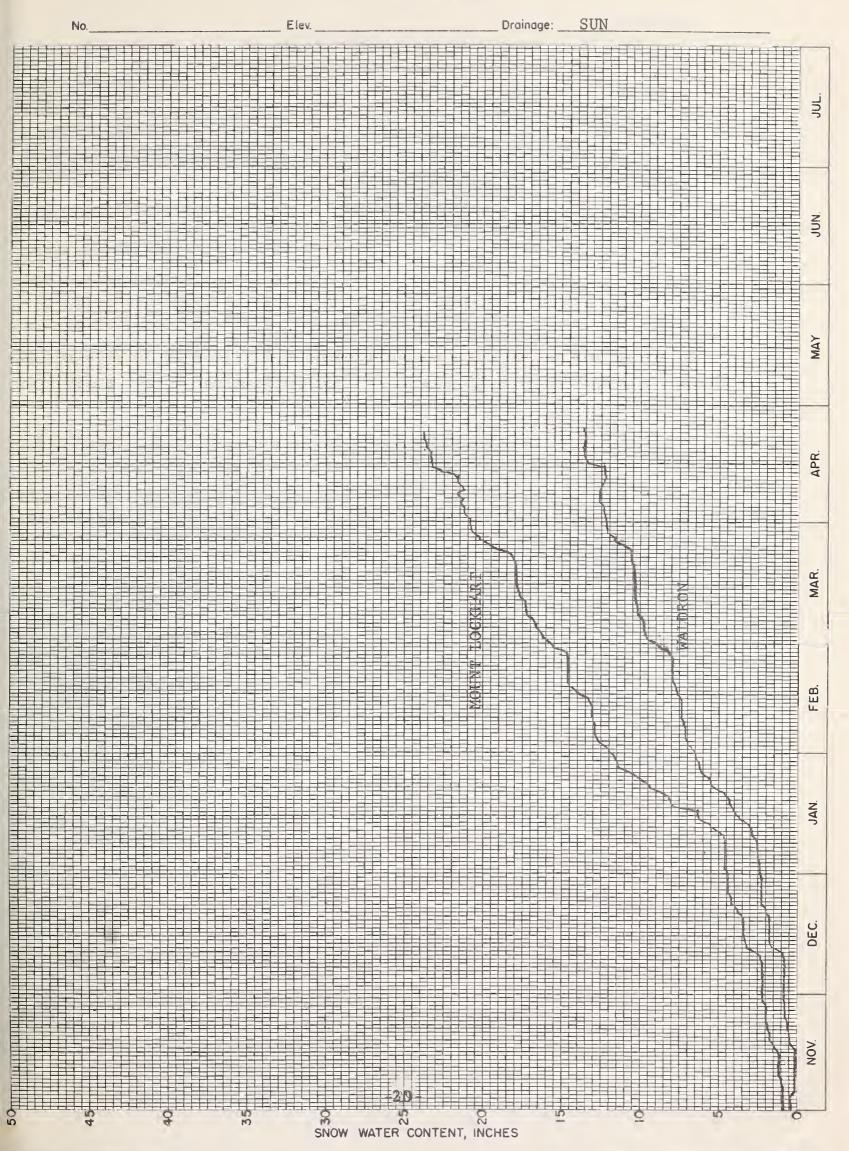




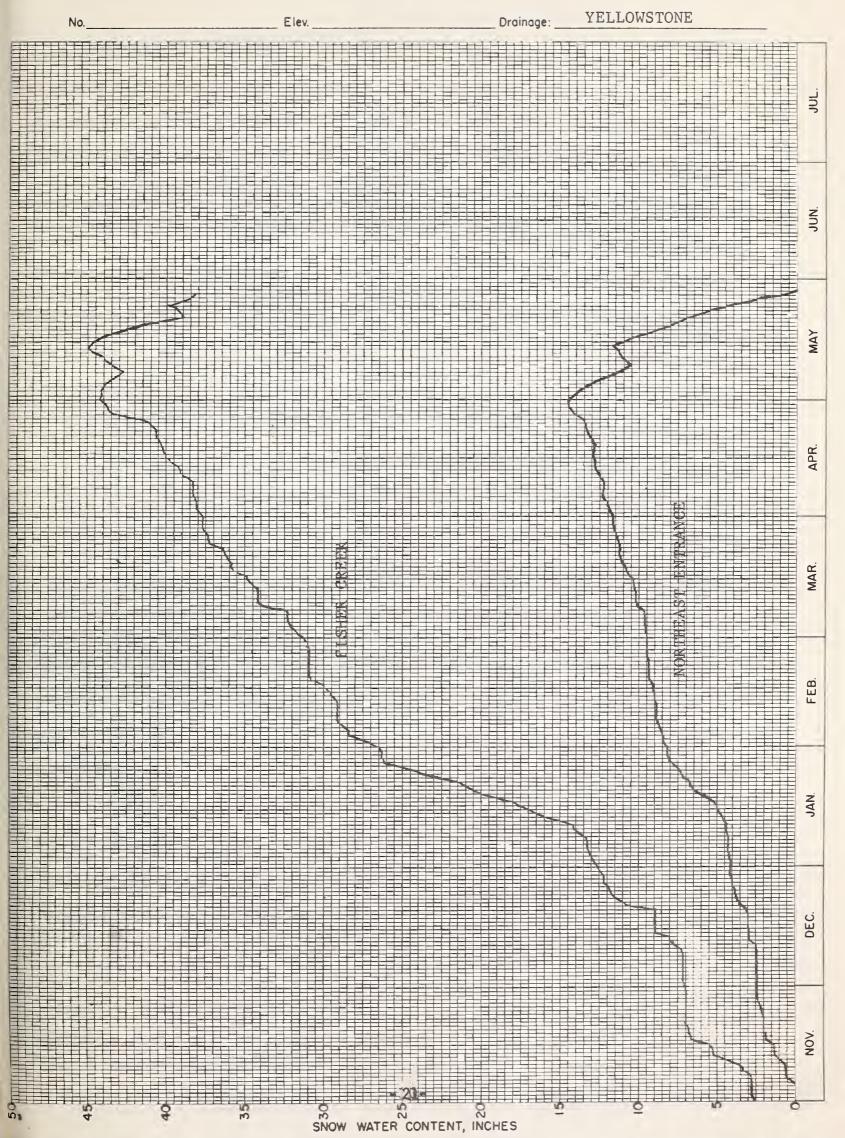




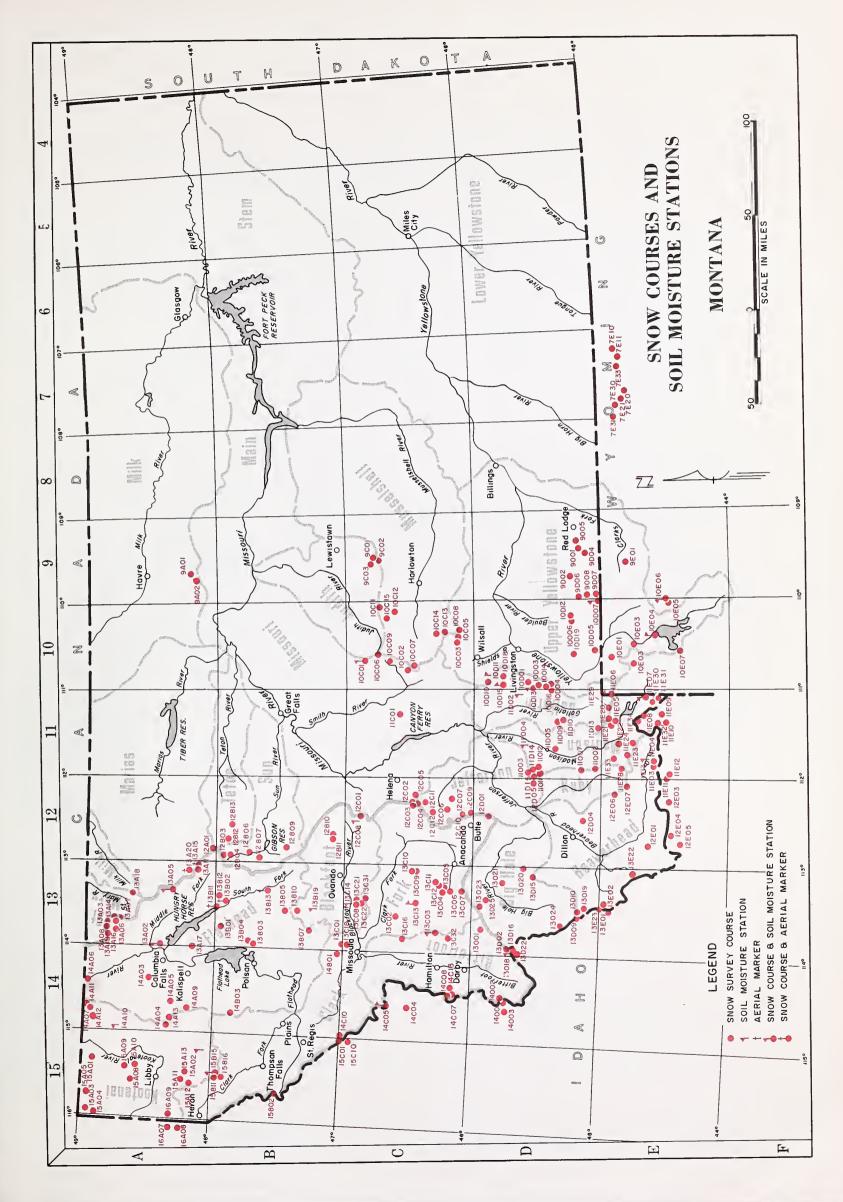












INDEA to MONTANA SNOW COURSES and SOIL MOISTURE STATIONS

| | Mond. By 2/ | | 1,2 | 7,111,6 | 7 * 1 | | 000 | 1 9 | 1 2 2 1 | | | 10 | 7 9 | 1111 | | 1 9 | | | May 15 | | n urces Wildlife | |
|--------------|----------------------------------|---|--|---|--|--|---|---|---|--|--|---|---|--|--|---|---|---|--|--|--|---|
| | Mensuring Dates 1/ | | 3.4,5 3,4,5,5,4,6 3,4,5,5,4,6 3,4,5,5,6,6 1,2,3,4,5 3,4,5 | 3,4,5,53,6 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 | 0,50,04 | | Monthly Monthly Monthly | Monthly Monthly | Monthly Monthly Monthly Monthly | Monthly Monthly | | Monthly | Monthly Nonthly | Monthly Nonthly Monthly Monthly | Monthly Monthly Monthly Monthly | Monthly Monthly | | | April 1, May 1, M | Opdodo June | MSU Agriculturia Experiment Station W. of M. School of Forestry Department of Energy, Mines & Resources U. S. Bureau of Sport Flaheries & Wildit Frigate Gooperator Soil and Maser Conservation Olstrict | |
| | Record | | | 1961 1937 1938 1960 1965 1961 | | | 1964 1964 1964 | 1956 1950 | 1965 1961 1963 1964 | 1962 1963 | - | 1962 | 1961 1966 | 1966 1956 1965 1963 | 1969 1963 1969 1963 | 1960 | | | 1, | follows: | turni ba hool of of Energ u of Spo perator | П |
| | Ranpo | 4N 100 9 S 118 B 19 | | STATIONS | BASIN | 30W 25W 29W | 19W 14W | 15W 15W 15W 17W | 19W 24W | BASIN | 2W | 18 5 N | 65 57 56 56 56 | 16E 8E 16E 7W | 7E 14E | | | y 1. March | as foll | Agricua of M. Sc artment S. Burca zate Cool | | |
| | Twp. | | | 2 | ₩ | | 31N 30N | 8N 13N 17N 6N | 2.S 10N | RIVER | 148 | 3S 13S | 1N 2S 4S 11S | 4S 11S 29N 13N 28N 13N | 2N 9 S | | LEGEND | February | 2 | 7. MSU 8. U. c 9. Depc 10. U. 3 11. Priv 12. Soil | 0101 0101 | |
| | 500. | 11 22 11 22 22 22 23 21 6 6 6 10 10 10 10 10 10 10 10 10 10 10 10 10 | | | | 3IA RI | 5 2 2 | 24 | 26 11 21 30 | 1VER 13018M 14C05M | HSSOURI | 0.1 | 11E13M 6700 23 11E07M 4800 7 11E07M 6700 34 | 7250 25 4856 18 6860 10 7150 1 | M 3950 7420 4700 6350 6020 7350 | 33 | | L E G | January 1, | the sn | e 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 0 |
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| | Numbor | | | SOIL MOISTURE | Ö | 15B15M 14A10M 15A02M | 13A02M 13A05M | RIVER 13C13H 13C14M 13B19H 13C03N | 11E13M | | | 10015N 11D02M 10013N 11E06M | | 1N STEM 9A05M 10C01M 9A01M 12C08M | ER 10011M 10007M | | | 3.6 refer | Agency that | servacio srvice slompany srvice Park Sel | | |
| | | Z 0 | | | 0 | | /ER | | RIVER | | | /ER | V ER | E.R. | <u>~</u> | | | 1,2,3,4,5,5½,6 | er to Ag | Soll con Forest S Coologic Power Indian S | | |
| | brainage Baain & Course Name | UPPER YELLOW | Unid Ridge Comp Soutia Cooke Station Crevice Mountain Finher Greek Grizziy Penk Independence Mill Greek | Morument Peak Northeast Entrant Porcupine R.S. Sncajawea South Fork Shield Timberline Creek West Rosobud | WI.CG 71.1.1 | KOOTENAI RIVE Bace Trall | Barce Trail Murphy Lako R, S. Raven R, S. | FLATHEAD RIV Desart Mountain Marias Pass | CLARK FORK Black Pinc Black Pinc Lubrecht Forest Scoley Lake Skalkaho Summit | BITTERROOT R Glabons Pass Lolo Pass | Lolo Pass | BEAVERHEAD Lakeview | MADISON RIV Red Bluff West Yellowstone | GALLATIN RIV Bridger Bowl College Site Lick Greek Twenty-One Mile | MISSOURIRIV Beaver Creek Kings Hill Rocky Boy Stemple Pass | YELLOWSTONE Battle Ridge Northeast Entrance | | | 1/ Numerals 1,2, and June 1, | 2/ Numorals ref | 1. U. S. Soll Connervotion S. 2. U. S. Forest Service 3. U. S. Forest Service 3. U. S. Coological Survey 4. Montana Power Company 5. U. S. Indian Service 6. U. S. Nallomal Power Service 6. U. S. Nalloma Service 6. U. S. Nal | |
| | Mean. By 2/ | | 1,12 1 1,12 1,12 1,12 | | 7 | 11114 | | 8 - 2 2 - | 2, 2 1 2 2 2 2 2 | 1,3,6 | | | | 7 1 8 1 | 1 2 2 1 2 2 1 2 2 1 | | т . | 8 | 0000 | | | |
| | Mescuring Oates 1 | | વ્યવ્યવ્ય વ્યવ ૧ ૧ ૧૯૧૧ ૧ ૧ ૧ ૧૯૧૧ ૧ ૧૧૧ ૧ ૧ ૧૯૧૧ ૧ ૧૧૫ ૧ | | 3,4,0 2,3,4,0 6,5,2,4,5,5,2 | 2,3,4,5 1,2,3,4,5 1,2,3,4,5 3,4,5 | 3,4,5 | 1 2 4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 | | | 1,2,3,4,5,5%,6 3,4,5 1,2,3,4,5,5%,6 | 1,2,3,4,5,5%,61,2,5%,61,1,2,3,4,5,5%,61,5%, | 2,3,4 1,2,3,4,5,5½,6 3,4,5 1,2,3,4,5 | 1,2,3,4,5 | วัน พ.พ.พ.พ.พ. รัฐ ฐ ฐ ฐ ฐ ฐ ฐ ฐ ภัณ้ ณั ณั ณั ณั ณั ณั | 3,4,5,5%,6 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 | 1,2,3,4,5 | ယယ္ယယ္လ သံ့သံ့သံ့သံ့သံ့ က်က်က်က်က် | านนนน เราสุสุสุ เกิกไก้ | | 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2 | - 1 |
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| | Rungo | | | | | MS 2M | 2W 2W | 3E 1E 1E 2W 3W | 118 244 35 36 36 36 18 18 18 18 18 | | | 20 20 20 20 20 20 20 20 20 20 20 20 20 2 | | 168 30 108 88 108 108 88 108 118 118 118 118 | | 11E 8E 16E 7W 6W 6W | 5W 5W 11W 10W 10W | | 10W 9W 9W 10W 10W | | 17E 18E 18E | |
| | Twp. | | 28 28 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | 0 N N N N | 5N 1N 7N 7N | 8 S 4 S | 4.5 6.5 6.5 11.5 11.5 11.5 12.5 12.5 10.5 11.5 11.5 11.5 11.5 11.5 11.5 11 | | | 58 68 1N 108 | 53 45 45 68 | 38 55 98 118 | 28N 9N 9N 12N 11N 5N 6N 6N 9N 11N 13N 13N | | 13N 28N 13N 13N 8N | 8N | 27N 28N 23N 26N 26N | 202 202 202 202 202 202 202 202 202 202 | | 12N 12N 12N | |
| | S00. | | | | 68 113 | 21 10 17 32 | 211 | 22 13 27 23 | 28 31 24 33 17 19 | 34 | | | 19 24 14 26 1 | 2 1 7 | 23 23 34 34 34 34 34 34 34 | 16 34 16 12 13 | 19 | 25 33 25 13 20 17 | | | 24 19 8 20 | |
| | Elov. | | 8850 8600 7900 7850 8500 6960 | 8800 8600 8280 7650 8250 8750 | 7300 | 6500 7200 8000 6500 | 0508 | 6550 7500 6100 8760 7900 | 7750 7000 7500 7150 8300 7600 | 6800 | 7350 8150 7250 9000 | 8100 6600 6860 7400 | 6700 6700 8100 8500 7150 | ≥ | 7600 7600 8000 6400 7000 8050 | 5200 5200 6600 6600 6800 | 8000 | 5900 5200 5700 6000 | 6000 7000 6400 5600 5700 6800 | | 7100 6100 5600 8000 | |
| | Number | | 11D14 11D08 12E07 11D15 12E06 12C05 | 13020 13019 13021 13025 13025 | 13024 12C07 12C09 | 12006 12001 12011 12011 | 11007 | 11E05 11D05 11E22 11E28 11D11 | 11631 11623 11603 11621 1163 1163 | 111630 | 10014 11009 10015 11E29 | 10004 10003 10013 11D10 | 10018 10001 10016 11013 11E06 | W A | 10015 10013 10007 10014 10002 10001 | | I A S | 13A15 13A20 12B06 12B09 12B09 | 12812 12813 12813 12804 12803 | | 9002 9001 9003 | |
| | Drainingo Basin & Course Name | RUBY RIVER | Branham Lakes Clover Meadow Plytde Middle Mill Greek Notch Sanggler Mine | Authorise Lake Oarkhorse Lake Problen Mudd Lake Pallande Greek | JEFFERSON RIVE Borry Readow Copper Noutrain | Plene Crounds Plene Crounds Pipestone Pass Rocker Peak Unele Sam Culch | MADISON RIVER Call Road Four Mile | Hebgen Oam Jack Greek Lake Greek Lion Nountain Lower Tekn | Madison Plateau Meridian Geek North Meadow Potomageton Park Sintlnel Greek Soap Bogus Divide | West Vellows Whiskey Greek Whiskey Greek GALLATIN RIVER | Arch Falls Bear Basin Bridger Howl Carrot Basin | Devil's Side Nood Meadow Lick Greek Little Park | Maynard Creek New World Slower Falls Taylor Peaks Twenty-One Nile | MISSOURIRIVER Brar Paw Skl Arca Boulder Hountain Gliessan Reservoir | Orlandia Creek Olysy Poak Engle Creek File Peak Forest Lake Grasshopper Haymaker | Johnson Park Kings Hill Rocky Boy Stemple Pass Ten Mile Lower Ten Mile Middle | Ten M11c Upper SUN-TETON-MA | Badger Pass Blue Lake Cabla Greek Five-Bull Freight Greek | Mount Lockhart Waldron Wrong Creek Wrong Ridge | JUDGITH | Avalancie Crystal Lake Rock Greek Sour Park | |
| | Mugg. | | 1 2 2 2 1 1 2 2 2 2 1 1 2 2 2 2 2 2 2 2 | 12 | 1 1 2 1 1 | 1,5 | 2,11,2 | 7 1 1,2 | 1 1 1 2 5 5 | 2,2 | 1,2 | 1,2 | 00: | - 7 80 H - 7 80 F | | | 6 6 6 6 6 6 | 9 6 | - = | 1 5 1 | 10 | |
| SNOW COURSES | Mossuring Oates 1/ | | 2 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 | 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | 24,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4, | 3,4,5 | ,2,3,4,5, 3,4,5 6,3,4,5 3,4,5 | ,2,3,4,5,5,6 ,2,3,4,5 3,4,5 3,4,5 | 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 3,4,5 | 1,2,3,4,5,53,6 | ,2,5,4,5 3,4,5 3,4,5 3,4,5 | ,2,3,4,5,5½,6 2,3,4,5 2,3,4,5 2,3,4,5 | 23,4,5,5 23,4,5,5,5,6 33,4,5,5,5,6 33,4,5,5,5,6 | 2,3,4,5 1,2,3,4,5 2,3,4,5 2,3,4 1,2,3,4,5,5,6 1,2,3,4,5,5,6 | 3,4,5 3,4,5 3,4,5,5,3,6 3,4,5,5,3,6 | 3,4,5 1,2,3,4,5,5,6 1,2,3,4,5,5,6 1,2,3,4,5,5,6 | 6,4,6 2,4,0 2,0,0 2,0,0 3,0,0 3,0,0 4,0 5,0 5,0 5,0 5,0 5,0 5,0 5,0 5,0 5,0 5 |) W W | 3,4,5 | 2,4,6 2,4,4,0 2,0,0,0 | 1.2. 4.0. 5.4. 5.4. 5.4. 5.4. 5.4. 5.4. 5.4 | |
| | Record | | | 969 2 9 | | | | | 957 941 948 1 968 1 | | | | | 936 939 1 936 1 936 1 956 | 960 969 937 934 1 | | 1962 1922 1955 1922 | 337 | 948 | 965 935 948 | 948 948 967 948 | 3 |
| | | 278 BASIN 278 314 278 314 288 318 288 308 288 308 288 318 298 318 378 228 378 228 368 238 368 238 368 238 368 238 368 238 368 238 368 238 368 238 368 238 | | | | | 19W 18W 18W 25W 14W | 118K 118K 118K 118K 118K 118K 118K 118K | | | | 2278 138 148 158 158 158 158 158 158 158 158 158 | 138 1 138 1 138 1 178 1 | 13W 118W 118W 118W 118W 118W 118W 118W 1 | | | 168 1 168 1 168 1 | ~ | | | 2W 1 2W 1 15W 1 15W 1 15W 1 | п |
| | ė | | | | 338 368 378 378 | 24N 28N 22N 28N | 31N 22N 35% 28W | 250 250 250 250 250 250 250 250 250 250 | | N 15N 15N 15N | 181 8 8 6 7 6 7 7 1 4 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 | 148 148 58 138 | 138 138 68 68 | 588 1688 588 1688 1588 | | 1 S 2 S S S S S S S S S S S S S S S S S | 24% 2 34% 2 35% 1 | | | 12S 4S 8S | 145 145 105 105 148 | |
| | - 01 | | 2485000 | 20000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2 | | 31 7 30 | 24 11 11 35 | 5150 112 5150 113 5770 15 5770 16 5770 16 5770 16 5770 16 5770 25 5770 | | 26 | 23 12 14 11 | 17 16 6 119 | 22 22 30 35 | 112 119 119 119 | 28 20 16 4 5 19 25 | 32 34 | 24 1 22 27 | 27 36 81 RIV | 12 | 24 21 11 | 26 27 27 15 15 | A |
| | Elev. | COLUMBIA | 15.018 SOUTH | | 60.0 60.0 60.0 60.0 60.0 | 5900 5900 6750 6400 | \$600 \$500 6300 \$150 | | | 7 00 5700 6250 | 7800 7200 7200 4800 | 5900 5450 5450 | 4040 6250 7100 7260 | 6500 6000 7780 6500 7400 6800 | 00017 | 5840 5580 6570 7940 6510 6510 | \$800 \$600 \$900 \$700 | 5500 27 353 5800 36 368 MISSOURI RIVER | 7600 | 7800 8100 | 6930 7400 7480 8100 7090 | |
| | Muaber | Ü | | | 15A09 1 A12 15A01 14A12 14A07 | 14407 14803 13411 13411 13417 | | 13419 15409 13812 15403 13413 14405 3405 13807 | | 13801 13811 13805 13C13 2810 12' 1 | | 15001 13004 13024 | 1303 | 13C05 13C18 13C07 13C06 13C01 14801 | 13C16 13C32 13C32 13B01 13B02 14C07 14D02 | 14001 14001 14013 14008 | 13A18 13A03 13A14 13A14 | 13A06 13A08 MI | 13010 | 13E22 13015 13509 | 11E04 11E03 13E01 13E23 13E23 | |
| | Drainage Basin & Course Name | | A O O TENA! RIVER 3314 A to "eak Banfirld Sountain Baree reck 8 re- Ridory 5 re- reck 1 far e reck 9 re- reck 1 far e reck | Bris. Freek Briss Creek Codar Greek Graves Creek Graves Creek Hinkins Lake Neeker Greek | Lost Soul Lost Soul Sourcain Soul Soul Soul Soul Fear Pear Pour FlatHFAD RIVER | Basoo, eak Beaver Lake Big Greek Can Misery | Desert Mointain Fatty Treek Fla top Mountain Griffin Creek Olvide Onslight Lake | Hell Roaring Divide Molbrook Missenhn Logan Creek Marias Pass | Mineral Greek North Fork Jocko Spotted Gear Mountain Trinkss Lake Tvin Greeks | CLARK FORK RIVER Blank Pine Copper Creek Cotter Mine | Coyote (1111) El Dorado Mine Fred Surr Pass Gold Creek Lake Reart Lake Trail | Toodoo Basin Hoodoo Creek Intergaard Lubrecht Forest No. 3 | Ubrecht Forest No. 6 N. Fork Elk Creek Red Llon Skalkeho Strait Slide Rock Mountain | Southern Cross Spring Colch Storm Like Storm Like Stratt Mountain T.V. Mountain | BITTERROOT RIVER Ambross Coyote Mendous Trail East Fork R.S. Clobons Pass Lost Horse Nex Perres Came | Nez Perce Pass Saddle Sountain Tvelvezile Creek Tvin Lakes | S.I. MAKK KILEK BAN Ladson Bay Olvide Toberg Lake No. 3 Losepfine Lover No. 9 Mount Allen No. 7 | Ptegan Pass No. 6 Ptarmigan No. 8 | BEAVERHEAD RIVER Bloody Olck Carter Creck | Dad Creek Lake Elk Horn Springs Gold Stone | Lakewkew Canyon Lakewkew Ridge Lemin Pass Lemin Ridge Trail Greek White Pine Ridgs | |

Agencies and Organizations Cooperating in Montana Snow Surveys

- U. S. Forest Service
 Region I, Missoula, Montana
 Montana Forests and Ranger
 Districts
- U. S. Geological Survey Helena, Montana Portland, Oregon
- U. S. Army Corps of Engineers Portland, Oregon Seattle, Washington Walla Walla, Washington Omaha, Nebraska
- U. S. Indian Irrigation Service St. Ignatius, Montana
- U. S. Weather Bureau Helena, Montana Portland, Oregon Kansas City, Missouri
- U. S. Bureau of Sports Fisheries and Wildlife Red Rock Lakes Refuge Monida, Montana
- U. S. Bureau of Reclamation Billings, Montana Boise, Idaho
- U. S. Bonneville Power Administration Portland, Oregon

- U. S. Soil Conservation Service Montana, Wyoming, Idaho
- Soil and Water Conservation Districts Montana Counties
- U. S. National Park Service Yellowstone National Park Glacier National Park
- Montana Power Company Butte, Montana
- Montana Water Resources Board Helena, Montana
- North Montana Branch Station Agricultural Experiment Station Havre, Montana
- Montana State University
 Agricultural Experiment Station
 Bozeman, Montana
- University of Montana School of Forestry Missoula, Montana
- Water Rights Branch, Dept. of Lands and Forests Victoria, British Columbia
- Department of Energy, Mines and Resources Calgary, Alberta

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
P. O. Box 98
BOZEMAN, MONTANA 59715
OFFICIAL BUSINESS

FEDERAL - STATE - PRIVATE

COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"The Conservation of Water begins with the Snow Survey"



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